



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/530,795	11/07/2005	John Charles Sinclair	3642.1001-000	9371
21005 7590 05/13/2010 HAMILTON, BROOK, SMITH & REYNOLDS, P.C. 530 VIRGINIA ROAD P.O. BOX 9133 CONCORD, MA 01742-9133				
EXAMINER				
LEE, JAE W				
ART UNIT		PAPER NUMBER		
1656				
MAIL DATE		DELIVERY MODE		
05/13/2010		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/530,795

**Applicant(s)**

SINCLAIR ET AL.

**Examiner**

JAE W. LEE

**Art Unit**

1656

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 February 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1.5, 7-27, 29-33 and 35-42 is/are pending in the application.
- 4a) Of the above claim(s) 26, 27 and 29-33 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1.5, 7-25 and 35-42 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Application status*

The instant Office action is a supplemental restriction requirement. According to MPEP 803.01, a restriction requirement is at the discretion of the examiner and according to 37 CFR 1.142(a), a requirement for restriction "may be made at any time before final action." See also MPEP 811.02, which states, "[s]ince 37 CFR 1.142(a) provides that restriction is proper at any stage of prosecution up to final action, a second requirement may be made when it becomes proper, even though there was a prior requirement with which applicant complied. *Ex parte Benke*, 1904 C.D. 63, 108 O.G. 1588 (Comm'r Pat. 1904)."

In response to the previous Office action, a non-Final rejection (mailed on 08/18/2009), Applicants filed a response and amendment received on 02/22/2010. Said amendment canceled Claims 2-4, 6, 28 and 34, amended Claims 5 and 7-25, and added Claims 35-42. Thus, Claims 1, 5, 7-25 and 35-42 are at issue and present for examination. Claims 26, 27 and 29-33 have been withdrawn from further consideration on the merits.

Upon further consideration, and additional review of the disclosure led the Examiner to issue the instant restriction requirement, which further restricts the subject matter of previous *Invention I*. The Examiner regrets any inconvenience this may cause.

***Election/Restrictions***

Further restriction is required for Claims 1, 5, 7-25 and 35-42 under 35 U.S.C. 121 and 372.

Invention I, Claims 1, 5, 7-25 and 35-42, contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

[1] Applicants are required to **elect a single first oligomer assembly** from those recited in claims 35-42.

[2] Applicants are required to **elect a single second oligomer assembly** from those recited in claims 35-39.

[3] Applicants are required to **elect a single third oligomer assembly** from those recited in claims 40-42.

It is noted by the Examiner that claims will be examined to the extent that elected first, second, and third oligomer assemblies read on the claims.

The inventions listed as Groups [1]-[3] do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: Where a group of inventions is claimed in an application, the requirement of unity of invention shall be

fulfilled only when there is a technical relationship among those inventions involving one or more of the same or corresponding special technical features. The expression "special technical features" shall mean those technical features that define a contribution which each of the claimed inventions, considered as a whole, makes over the prior art. Grant et al. (The crystal structure of Dps, a ferritin homolog that binds and protects DNA, Nature Structural Biology, Vol. 5, No. 4, 1998, pages 194-303) teach a crystalline protein lattice comprising *E. coli* Dps protein, having a regular structure with a repeating unit repeating in three dimensions, the repeating unit comprising protein protomers, wherein each protein protomer comprises at least a first monomer and a second monomer fused together, the monomers each being a monomer of an oligomer assembly into which the monomers are assembled for assembly of the protomers into the lattice, and wherein said first monomer is a monomer of a first oligomer assembly which has at least three rotational symmetry axes; and wherein said second monomer is a monomer of a second oligomer assembly, said second oligomer assembly having a rotational symmetry axis of the same order as one of the at least three rotational symmetry axes of the first oligomer assembly and being aligned with the one of the at least three rotational symmetry axes of the first oligomer assembly when said protomers self-assemble into the lattice (see Figures 2 and 4-7, their related discussions and 1DPS in the PDB database), which corresponds to the limitation of claim 1, and thus, the shared technical feature of the groups is not a "special technical feature", unity of invention between the groups does not exist. Furthermore, each different combinations of first, second and third oligomer assemblies, which are selected from proteins listed in

claims 35-42, represent a structurally distinct protein lattice with no unity of invention between the groups.

Restriction for examination purposes as indicated is proper because all these inventions listed in this action are independent or distinct for the reasons given above and there would be a serious search and examination burden if restriction were not required because one or more of the following reasons apply:

- (a) the inventions have acquired a separate status in the art in view of their different classification;
- (b) the inventions have acquired a separate status in the art due to their recognized divergent subject matter;
- (c) the inventions require a different field of search (for example, searching different classes/subclasses or electronic resources, or employing different search queries);
- (d) the prior art applicable to one invention would not likely be applicable to another invention;
- (e) the inventions are likely to raise different non-prior art issues under 35 U.S.C. 101 and/or 35 U.S.C. 112, first paragraph.

In the instant case, (c) and (d) applies because searching each different first, second, third oligomer assembly or any combination thereof as recited in claims 35-42 requires employing different search queries, and the prior art applicable to a protein lattice comprising *E. coli* PurE and human 6-pyruvoyl tetrahydropterin synthase would not likely be applicable to a protein lattice comprising human Mn superoxide dismutase

and *E. coli* dps, thereby presenting serious search and examination burden on the Examiner.

**Applicant is advised that the reply to this requirement to be complete must include (i) an election of a invention to be examined even though the requirement may be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.**

The election of an invention may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse. Traversal must be presented at the time of election in order to be considered timely. Failure to timely traverse the requirement will result in the loss of right to petition under 37 CFR 1.144. If claims are added after the election, applicant must indicate which of these claims are readable on the elected invention.

If claims are added after the election, applicant must indicate which of these claims are readable upon the elected invention.

Should applicant traverse on the ground that the inventions are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(l).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jae W. Lee whose telephone number is 571-272-9949. The examiner can normally be reached on 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Manjunath Rao can be reached on 571-272-0939. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JAE W LEE/  
Examiner, Art Unit 1656